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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,030	04/23/2004	Hong Teuk Kim	0465-1173PUS1	7501
2292	7590	08/11/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			MOTTOLA, STEVEN J	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/830,030	<b>Applicant(s)</b> KIM, HONG TEUK	
	<b>Examiner</b> Steven J. Mottola	<b>Art Unit</b> 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) s 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-19 is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 & 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kibayashi et al.

Refer to figs. 3 & 5 of Kibayashi et al. Treating claim 1 first, any two of the amplifier modules 15 in fig. 3, say 15-1 and 15-2, may be read as the first and second amplifiers claimed. Note that in fig. 3 amplifier 15-1 is mislabeled as simply 15. They are each connected to an individual power supply module 21k as shown in detail fig. 5, which may be read as the first and second power claimed. The common transmission line segments 121,172 may be read as the common input and output matching units respectively and the individual first amplifier input and output segments 122-1 and 171-1 may be read as the input and output matching units claimed respectively. All of the segments will provide an impedance matching function as described in the paragraph bridging columns 4 & 5 and that bridging columns 5 & 6 of the disclosure of Kibayashi et al. Since the output impedance seen by each (operating) amplifier will be the same the output voltage should be equalized assuming identical amplifiers. Any phase shift across the output segment 171 should be compensated by the input segment 121 assuming an inverting amplifier 15. Since each amplifier is an FET (col. 6, lines 50-51) and is used as a power amplifier, it must be in a common source configuration to have enough gain to function as a power amplifier and would therefore be inverting.

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Regarding claim 2, note that each amplifier has an associated switch 46 (fig. 5) which will control the flow of supply current to the amplifier. Regarding claim 3, individual amplifiers may be controlled to reduced gains (col. 2, lines 65-67) by control of the attenuator 154 (fig. 5) of an individual channel so that one could be reduced and another not resulting in high and low power amplifiers as claimed. Regarding claim 5, as already noted each unit amp is an FET, and the power supply 212 is a voltage generator (col. 6, line 36).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kibayashi et al.

The difference added by this claim is the specific type of transistor claimed; however the substitution of one well known type of power amplifier transistor for another would have been obvious in the absence of unexpected results because the effect of using another type would have been known in advance to one of ordinary skill in the art. Kibayashi et al. state only that an FET is "normally" used and the applicant uses FETs and HBJTs interchangeably. Thus the use of HBJTs is obviated since the applicant interchangeably uses them with FETs which are disclosed by the reference.

Claims 6-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the

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base claim and any intervening claims. The low pass and high pass matching units of claims 6 & 9 are not disclosed by Kibayashi et al.


Claims 12-19 are allowed.

Claim 12 essentially includes the limitations of claims 1,3 and 6 while claim 17 essentially includes the limitations of claims 1,3 and 9.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Mottola whose telephone number is 571-272-1766. The examiner can normally be reached on M-Th from 7 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal, can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven J. Mottola  
Primary Examiner